

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-19. (Canceled)

20. (Previously presented) A kit for assaying free protein S, the kit comprising:

a ligand comprising a polypeptide comprising the entire or essentially the entire protein S binding site in C4b-binding protein (C4BP), the ligand being capable of binding a free protein S at a first site;

a reagent comprising an antibody or a fragment thereof that specifically binds protein S at a site distinct from the first site; and

an indicator capable of producing a detectable signal indicative of the formation of a complex between free protein S, the ligand, and the reagent.

21. (Previously presented) The kit of claim 20, wherein the ligand is operatively linked to a carrier.

22. (Previously presented) The kit of claim 21, wherein the carrier is a microtiter plate.

23-30. (Canceled)

31. (Previously presented) A kit for purifying free protein S from an aqueous solution, the kit comprising:

a ligand selected from a group consisting of a polypeptide comprising the entire or essentially the entire protein S binding site in C4b-binding protein (C4BP), and a polypeptide having essentially the same protein S binding properties as C4BP comprising

an amino acid sequence homologous or analogous to the-protein S binding site of the C4BP molecule; and

at least one further reagent for purification of protein S, wherein the at least one further reagent is capable of releasing protein S from a complex comprising free protein S and the ligand.

32-34. (Canceled)

35. (Previously presented) The kit of claim 20, wherein the antibody is a monoclonal antibody.

36. (Previously presented) The kit of claim 20, wherein the antibody is a polyclonal antibody.

37. (Previously presented) The kit of claim 20, wherein the ligand comprises the extreme N-terminal SCR module of the beta-chain of the C4BP molecule.

38. (Previously presented) The kit of claim 20, wherein the indicator is selected from the group consisting of a chromogenic label, a fluorescent label, a chemiluminogenic label, an enzymatic label, and a radioactive label.

39. (Previously presented) The kit of claim 20, wherein the indicator comprises horseradish peroxidase.

40. (Previously presented) The kit of claim 20 further comprising a substrate for visualizing the detectable signal.

41. (Previously presented) The kit of claim 20, wherein the indicator is operatively linked to, or incorporated into, the ligand.

42. (Previously presented) The kit of claim 20, wherein the indicator is operatively linked to, or incorporated into, the reagent.

43. (Canceled)

44. (Previously presented) The kit of claim 31, wherein the ligand comprises the extreme N-terminal SCR module of the beta-chain of the C4BP molecule.

45. (Previously presented) The kit of claim 31, wherein the ligand is bound to a carrier.

46-49. (Canceled)

50. (Currently amended) The kit of claim 21, wherein the carrier is of a material selected from the group consisting of cross-linked dextran, agarose, polystyrene, polyvinyl chloride, and cross-linked polyacrylamide, ~~nitrocellulose, and nylon~~.

51. (Currently amended) The kit of claim 45, wherein the carrier is of a material selected from the group consisting of cross-linked dextran, agarose, polystyrene, polyvinyl chloride, and cross-linked polyacrylamide, ~~nitrocellulose, and nylon~~.

52. (Previously presented) The kit of claim 20 further comprising calcium ion.

53. (Previously presented) The kit of claim 20, wherein the ligand is synthetic or recombinant.

54. (Previously presented) The kit of claim 53, wherein the ligand comprises multiple subunits, each of which contains a protein S binding site.

55. (Previously presented) The kit of claim 20, wherein the ligand is derived from C4BP isolated from blood.

56. (Previously presented) The kit of claim 55, wherein the ligand is derived from C4BP through enzymatic cleavage.

57. (Previously presented) The kit of claim 20, wherein the indicator is operatively linked to, or incorporated into, the antibody or fragment thereof.

58. (Previously presented) The kit of claim 31, wherein the ligand comprises multiple subunits, each of which contains a protein S binding site.

59. (Previously presented) A kit for assaying free protein S, the kit comprising:

a ligand comprising a polypeptide having essentially the same protein S binding properties as C4b-binding protein (C4BP) comprising an amino acid sequence homologous or analogous to the protein S binding site of the C4BP molecule, the ligand being capable of binding a free protein S at a first site;

a reagent comprising an antibody or a fragment thereof that specifically binds protein S at a site distinct from the first site; and

an indicator capable of producing a detectable signal indicative of the formation of a complex between free protein S, the ligand, and the reagent.

60. (Previously presented) The kit of claim 59, wherein the ligand is operatively linked to a carrier.

61. (Previously presented) The kit of claim 60, wherein the carrier is a microtiter plate.

62. (Previously presented) The kit of claim 59, wherein the antibody is a monoclonal antibody.

63. (Previously presented) The kit of claim 59, wherein the antibody is a polyclonal antibody.

64. (Previously presented) The kit of claim 59, wherein the ligand comprises the extreme N-terminal SCR module of the beta-chain of the C4BP molecule.

65. (Previously presented) The kit of claim 59, wherein the indicator is selected from the group consisting of a chromogenic label, a fluorescent label, a chemiluminogenic label, an enzymatic label, and a radioactive label.

66. (Previously presented) The kit of claim 59, wherein the indicator comprises horseradish peroxidase.

67. (Previously presented) The kit of claim 59 further comprising a substrate for visualizing the detectable signal.

68. (Previously presented) The kit of claim 59, wherein the indicator is operatively linked to, or incorporated into, the ligand.

69. (Previously presented) The kit of claim 59, wherein the indicator is operatively linked to, or incorporated into, the reagent.

70. (Currently amended) The kit of claim 60, wherein the carrier is of a material selected from the group consisting of cross-linked dextran, agarose, polystyrene, polyvinyl chloride, and cross-linked polyacrylamide, ~~nitrocellulose, and nylon~~.

71. (Previously presented) The kit of claim 59 further comprising calcium ion.

72. (Previously presented) The kit of claim 59, wherein the ligand is synthetic or recombinant.

73. (Previously presented) The kit of claim 72, wherein the ligand comprises multiple subunits, each of which contains a protein S binding site.

74. (Previously presented) The kit of claim 59, wherein the ligand is derived from C4BP isolated from blood.

75. (Previously presented) The kit of claim 74, wherein the ligand is derived from C4BP through enzymatic cleavage.

76. (Previously presented) The kit of claim 59, wherein the indicator is operatively linked to, or incorporated into, the antibody or fragment thereof.

77. (Canceled)

78. (Canceled)

79. (Previously presented) The kit of claim 31, wherein the ligand is bound to a matrix.